

IN THE CLAIMS

Applicant amends the Claims as follows:

5. (Twice Amended) A selectable waveguide having a first position and a second position for respectively communicating first or second signals from an antenna feed to respective first and second probes, the selectable waveguide comprising,

an antenna feed port coupled to the antenna feed for communicating the signals between the antenna feed and the first and second probes,

a first waveguide section having a first shape and a first cross-section for coupling to the antenna feed port for communicating the first signal, the first shape ^{being} (is) straight,

a first port for coupling the first probe to the first waveguide section for communicating the first signal between the first probe and the first waveguide section,

a second waveguide section having a second shape and a second cross-section for coupling to the antenna feed port for communicating the second signal, the second shape ^{having a bend of} [is bent at] ninety degrees with a forty-five degree reflective surface,

a second port for coupling the second probe to the second waveguide section for communicating the second signal between the second probe and the second waveguide section, [the first and the second shapes are selected from the group consisting of straight and bent at ninety degrees with a forty-five degree reflective surface,] the first and second cross sections are selected from the group consisting of square and circular, the first and second



1 shapes and the first and second cross sections enable concurrent
2 isolated communications of the first and second signals through
3 either one of the first and second waveguide sections when the
4 first and second signals are orthogonally polarized respecting each
5 other, and

6 an element for supporting the first and second waveguide
7 sections, the element having a first position for communicating the
8 first signal between the antenna feed port through the first
9 waveguide section to the first port, the element having a second
10 position for communicating the second signal between the antenna
11 feed port through the second waveguide section to the second port.

RECEIVED
JAN 22 2001
TECHNOLOGY CENTER 2B00

16 6. (Twice Amended) The selectable waveguide of claim 2B00 wherein,

17 the element is a rotating element,

18 the first signal is a first polarized signal,

19 red < the first waveguide shape is straight,

20 the second signal is a second polarized signal,

21 red < the second waveguide shape is bent at ninety degrees having a
22 forty-five degree reflective surface, and

23 the selectable waveguide is for selecting the communication[g]
24 of either the first or second polarized signals, wherein the first
25 and second polarized signals being orthogonal [respecting] with
26 respect to each other.

27
28 ///



1 8. (Twice Amended) A selectable waveguide having a first position
2 and a second position for respectively communicating first or
3 second signals from an antenna feed to respective first and second
4 probes, the selectable waveguide comprising,
5 an antenna feed port coupled to the antenna feed for
6 communicating the signals between the antenna feed and the first
7 and second probes,
8 a first waveguide section having a first shape and a first
9 cross-section for coupling to the antenna feed port for
10 communicating the first signal, the first shape ^{being} is straight,
11 a first port for coupling the first probe to the first
12 waveguide section for communicating the first signal between the
13 first probe and the first waveguide section,
14 a second waveguide section having a second shape and a second
15 cross-section for coupling to the antenna feed port for
16 communicating the second signal, the second shape ^{having a bend of} is bent at ninety
17 degrees with a forty-five degree reflective surface,
18 a second port for coupling the second probe to the second
19 waveguide section for communicating the second signal between the
20 second probe and the second waveguide section, the first and second
21 cross sections are selected from the group consisting of square and
22 circular, the first and second shapes and the first and second
23 cross sections enable concurrent isolated communications of the
24 first and second signals through either one of the first and second
25 waveguide sections when the first and second signals are
26 orthogonally polarized respecting each other, and
27 an element for supporting the first and second waveguide
28 sections, the element having a first position for communicating the



1 first signal between the antenna feed port through the first
2 waveguide section to the first port, the element having a second
3 position for communicating the second signal between the antenna
4 feed port through the second waveguide section to the second port,
5 [The selectable waveguide of claim 5] wherein;

6 the second signal comprises a high frequency signal and a low
7 frequency signal[,];

8 the reflective surface is a frequency selective reflective
9 surface for reflecting the low frequency signal to the second port
10 and for passing the high frequency signal to the first port[,]; and

11 the second waveguide section comprises a waveguide extension
12 extending from the frequency selective reflective surface and the
13 first port for communicating the high frequency signal to the first
14 probe through the first port when the selectable waveguide is in
15 the second position.

16
17
18 9. (Twice Amended) A selectable waveguide arrangement for
19 respectively communicating first, second or third signals from an
20 antenna feed to respective first, second and third probes, the
21 selectable waveguide arrangement comprising a front end selectable
22 waveguide and a back end selectable waveguide, wherein,

23 the front end selectable waveguide comprises:

24 an antenna feed port coupled to the antenna feed for
25 communicating the first, second and third signals between the
26 antenna feed and the first, second and third probes, respectively;

RECEIVED
JAN 23 2001
TECHNOLOGY CENTER 2000



1 a first front end waveguide section having a first front end
2 shape for coupling to the antenna feed port for communicating the
3 second and third signals;

4 a first front end port for coupling to the back end selectable
5 waveguide for communicating the second and third signals between
6 the antenna feed port and the back end selectable waveguide;

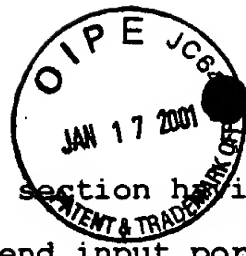
7 a second front end waveguide section having a second front end
8 shape for coupling to the antenna feed port for communicating the
9 first signal;

10 a second front end port for coupling the first probe to the
11 second front end waveguide section for communicating the first
12 signal between the antenna feed port and the first probe through
13 the second front end waveguide section; and

14 a front end element for supporting the first front end
15 waveguide section and the second front end waveguide section, the
16 front end element has a first front end position for communicating
17 the second and third signals between the antenna feed port through
18 the first front end waveguide section through the first front end
19 port to the back end selectable waveguide, the front end element
20 has a second front end position for communicating the first signal
21 between the antenna feed port through the second front end
22 waveguide section through the second front end port to the first
23 probe, and wherein,

24 the back end selectable waveguide comprises:

25 a back end input port coupled to the first front end port for
26 communicating the second and third signals between the first front
27 end port respectively to the second and third probes;



1 a first back end waveguide section having a first back end
2 shape for coupling to the back end input port for communicating the
3 second and third signals;

4 a first back end port for coupling to the first back end
5 waveguide section for communicating the third signal between the
6 back end input port and the third probe through the first back end
7 waveguide section;

8 a second back end waveguide section having a second back end
9 shape for coupling to the back end input port for communicating the
10 second signal;

11 a second back end port for coupling the second back end
12 waveguide section to the second probe for communicating the second
13 signal between the back end input port and the second probe through
14 the second back end waveguide section; and

15 a back end element for supporting the first back end waveguide
16 section and the second back end waveguide section, the back end
17 element has a first back end position for communicating the third
18 signal between the back end input port through the first back end
19 waveguide section through the first back end port to the third
20 probe, the back end element has a second back end position for
21 communicating the second signal between the back end input port
22 through the second back end waveguide section through the second
23 back end port to the second probe, one of the first and second
24 front end shapes ^{being} (is) straight and the other ^{of said 1st & 2nd FES being a bend of} (is bent at) ninety
25 degrees, one of the third and forth back end shapes (is) straight and
26 the other (is bent at) ninety degrees, the first, second, third and
27 forth waveguide sections have cross sections selected from the
28 group of square and circular.